MISSION NEED STATEMENT (MNS)
FOR
MARITIME PREPOSITIONING FORCE FOR THE 21ST CENTURY
(MPF FUTURE (MPF(F))

1. Defense Planning Guidance Element. This Mission Need Statement (MNS) is a guide for the Maritime Prepositioning Force Future (MPF(F)) platform and platform specific systems design efforts; research, development and acquisition program decisions; service and joint doctrine development; and cooperative efforts with U.S. Allies. This system/platform requirement is envisioned as a technological opportunity and responds to the following:

   a. Department of Defense Defense Planning Guidance (DPG), Future Years Defense Plan (FYDP) 2000-2005.
   b. Joint Vision 2010.
   c. Forward From The Sea, dated 19 September 1994
   d. Marine Corps Master Plan for the 21st Century, dated 8 October 1997.
   e. Marine Corps Warfighting Concepts:
      (1)"Operational Maneuver From the Sea (OMFTS)" dated 4 January 1996.
      (2)"Ship-To-Objective Maneuver(STOM)" dated 25 July 1997.
      (3)"Maritime Prepositioning Force 2010 and Beyond (MPF 2010)" dated 30 December 1997.
   f. Naval Warfighting Concept, "Seabased Logistics" dated 12 May 1998.

2. Mission and Threat Analysis.

   a. Mission. The general missions of MPF(F) are:

      (1) To provide Combatant/Joint Force Commanders a highly flexible, operational and logistics support capability to meet widely varied expeditionary missions ranging from projecting combat power ashore, e.g., OMFTS and STOM, to conducting independent operations, e.g., Smaller Scale Contingencies (SSC).
      (2) The mission capabilities must be fully integrated with other Marine, Naval, Joint, interagency, and combined forces/systems.
      (3) To rapidly deploy Marine Air Ground Task Forces (MAGTF), associated Navy elements, and other services/forces as required, to enable joint maritime expeditionary operations.
      (4) To conduct operations ranging from the current Maritime Prepositioning Ship (MPS) capability to exploiting the sea as maneuver space from over-the-horizon, to operating while dispersed, all while supported by force protection commensurate with the threat. MPF(F) will not possess a forcible entry capability.

b. Required Operational Capabilities. MPF(F) must contribute to future forward presence and power projection scenarios through the key mission capabilities of Force Closure, Amphibious Task Force (ATF) Interoperability, Sustainment, and Reconstitution and Redeployment.

(1) Force Closure.

(a) MPF(F) will combine the capacity and endurance of sealift, with the enhanced speed and flexibility of airlift, to marry-up forces and equipment in a forward area. This combination provides a rapid deployment option for heavy CONUS-based Marine forces. Marine and Navy units will deploy by a combination of surface craft and strategic, theater, and tactical airlift to meet the prepositioning system(s)/platform(s) while underway or en route to objective areas.

(b) To facilitate this process, the platform shall incorporate air and surface interface points, as well as, personnel billeting and support facilities. It shall provide easy access to equipment for inspection, maintenance, testing, and selective configuration of tactical loads in order to arrive and assemble in the objective area, prepared for operations.

(2) Amphibious Task Force Interoperability.

(a) MPF(F) will possess the capability to reinforce the assault echelon of an ATF. The MPF(F)will not have an independent forcible entry capability.
(b) Within the overall power projection mission, MPF(F) will be able to interface with the ATF and should interoperate with and potentially provide maintenance support for ATF aircraft, surface assault craft and advanced amphibious assault vehicles. MPF(F) must possess versatility through lighterage capabilities, cargo handling systems (including selective offload of equipment and supplies) and C4I interfaces to reinforce the striking power of an ATF.

(3) Sustainment.

(a) MPF(F) must serve as a conduit for logistics support and sustainment, and employ an automated inventory management capability. It must be able to receive, store, maintain, manage and deploy the equipment and supplies to sustain logistics support of naval operations. This will be accomplished independently or as part of a larger sea-based logistics effort.
(b) On-board cargo handling and delivery systems, integral to MPS platforms, will provide for the selective offload of supplies, enable supplies to be transferred, be compatible with Naval and commercial

delivery systems, and incorporate the means to deliver this support ashore.

(c) Should shore basing be required, MPF(F) must possess the flexibility to support the logistics and maintenance efforts ashore.

(4) Reconstitution and Redeployment. This system/platform must be capable of in-theater, at sea, reconstitution and redeployment to expedite immediate employment to follow-on missions.

c. Other Operational Capabilities.

(1) Joint Command and Control- MPF(F) must be interoperable with other naval, interagency, joint, and combined forces.

(2) Medical Capabilities – MPF(F) must provide medical care consistent with the mission in support of the ATF.

d. Threat and Threat Environment. The anticipated threat environment that MPF(F) is expected to operate in is defined in "Major Surface Ship Threat Assessment" ONI TA-018-98. MPF(F) must be capable of operating in this threat environment.

3. Non-material Alternatives. Changes in current MPF doctrine, operational concepts, tactics, organization and training are insufficient to address the issue of maintaining an affordable and capable seabased logistics and power projection capability in support of OMFTS and STOM.

4. Potential Material Alternatives.

a. Product Improvement Program. As the Required Operational Capabilities are defined for MPF(F), a product improvement program utilizing the current MPF ships, modified by the development of internal configurations more suited to OMFTS/STOM requirements, may prove to be viable and cost effective.

b. Non-developmental Approach. There is no known commercial, US or allied military services non-developmental platform available for procurement that will meet the requirements stated herein.

c. Research and Development (R&D). R&D concepts should consider:

(1) Acquiring new systems/platforms specifically designed for OMFTS/STOM mission capabilities.

(2) Conversion of existing U.S. Navy or commercial ships.

(3) Variants of U.S. Navy or commercial designs. As part of their shipbuilding programs, various Allies have combat, hull, mechanical and

electrical system programs ongoing or under development that offer possible cooperative opportunities.

(4) Cargo handling and discharge systems necessary to conduct seabased logistics operations.

5. Constraints

a. Key Boundary Conditions:

(1) Architecture. Platform designs must employ a total ship system architecture/engineering approach that balances life cycle cost (Total Ownership Cost(TOC)) and performance. The approach should also permit rapid upgrade and change in response to evolving operational requirements and should promote commonality with other ship designs.

(2) Design.

(a) The design of the MPF(F) will be based on proven conventional criteria and built to the best commercial practices using current state-of-the-art technology in conformance with ABS and/or USCG standards. Commercial–off-the-shelf (COTS) non-developmental systems, modified as necessary for shipboard use and having a reliable operational history, shall be incorporated into the design. Consideration should be given to the maximum use of modular design and construction techniques to facilitate system/platform upgrade and configuration change in response to evolving operational requirements and emerging technologies.

(b) Ship's cargo spaces should be designed with sufficient flexibility to permit reconfiguration for mission purposes. This should provide the capability to support the setup/operation of containerized functional capabilities, e.g., medical and repair facilities.

(3) Manpower, Personnel and Training (MPT). The system/platform should be automated to the greatest extent possible to promote significant manpower and training cost savings. Tradeoff analyses will be conducted for MPT areas in order to determine broad constraints that will be required for operational requirement definition. These constraints should be the basis for operator and maintainer manpower and skill requirements. The platform must be capable of being manned by a civilian crew.

(4) Standardization and Interoperability. MPF(F) must comply with applicable published standards. MPF(F)must meet approved DOD/Joint standards for interoperability.

b. Operational Environment:

(1) MPF(F) must perform its offload mission in sea state 3, perform essential ship functions in sea state 5 and survive sea state 8.
(2) MPF(F) must meet Level I survivability requirements as defined in OPNAVINST 9070.1 (Survivability Policy for Surface Ships of U.S. Navy), depending on final threat definition and Analysis of Alternatives findings. MPF(F) is not intended to operate in a chemical, biological, and radiological environment, but requirements for chemical, biological and radiological decontamination shall be considered during Analysis of Alternatives.
(3) MPF(F) must be able to operate in U.S., foreign, and international waters in full compliance with existing U.S. and international laws and regulations.
(4) MPF(F) must be fully interoperable with other U.S. Navy, Marine Corps, Joint and Allied forces, and other agencies in combined operations.
(5) When operating in a threat environment, MPF(F) will be protected by other Naval, Joint, or Combined Forces. Independent operations will only be conducted in a secure or benign environment.
(6) MPF(F) must be able to safely navigate and access a wide range of ports worldwide to include the ability to conduct Roll On/Roll Off and Lift On/Lift Off cargo operations in the majority of worldwide commercial marine cargo terminals as well as in-stream cargo operations in unimproved third world ports.

6. Joint Potential Designator. Joint Interest.

MISSION NEED STATEMENT

FOR

MARITIME PREPOSITIONING FORCE FUTURE (MPF(F)) FOR THE 21ST CENTURY

ACAT I

FINAL COORDINATION, PROCESSING AND FORWARDING:

(N81) — 02/07/00 (DATE)

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